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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference HH/ARI 53976	FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE2005/000348	International filing date (day/month/year) 10-03-2005	Priority date (day/month/year) 12-03-2004
International Patent Classification (IPC) or national classification and IPC See Supplemental Box		
Applicant Telefonaktiebolaget LM Ericsson (publ) et al		

- This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 5 sheets, including this cover sheet.
- This report is also accompanied by ANNEXES, comprising:
 - ☒ (sent to the applicant and to the International Bureau) a total of 6 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

- This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

Date of submission of the demand 12-10-2005	Date of completion of this report 10-02-2006
Name and mailing address of the IPEA/SE Patent- och registreringsverket Box 5055 S-102 42 STOCKHOLM Facsimile No. +46 8 667 72 88	Authorized officer Peter Hedman/MN Telephone No. +46 8 782 25 00

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2005/000348

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Cover sheet

INTERNATIONAL PATENT CLASSIFICATION (IPC) :

H04M 3/42 (2006.01)

H04Q 7/38 (2006.01)

H04L 12/58 (2006.01)

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2005/000348

Box No. I **Basis of the report**1. With regard to the **language**, this report is based on:

the international application in the language in which it was filed

a translation of the international application into _____,
which is the language of a translation furnished for the purposes of:

international search (Rules 12.3(a) and 23.1(b))



publication of the international application (Rule 12.4(a))



international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the **elements** of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished



the description:

pages 1 - 22 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____



the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* 1 - 6 _____ received by this Authority on 12 - 10 - 2005

pages* _____ received by this Authority on _____



the drawings:

pages 1 - 3 _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____



a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

the description, pages _____



the claims, Nos. _____



the drawings, sheets/figs _____

the sequence listing (*specify*): _____any table(s) related to the sequence listing (*specify*): _____4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____



the claims, Nos. _____



the drawings, sheets/figs _____

the sequence listing (*specify*): _____any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2005/000348

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-25</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-25</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-25</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

The claimed invention relates to a method and an arrangement for providing information regarding a set of users belonging to different networks to a client. The client belongs to a network different from the networks of which the set of users belong to. The invention which is described in the amended independent claims 1 and 20 is focusing on the problem of the intensive signalling which is normally necessary when updating and accessing information when different networks are involved.

Reference is made to the following documents:

D1: WO2003065701 A1

D2: WO2003088688 A1

D3: WO2002095630 A1

D1 refers to a method of accessing the presence information on a predetermined group of entities (See page 4, line 3 - page 5, line 6; page 7, line 13-page 8, line 33; page 11, line 7-32; claims 1,2,11,12,15 and 18-22).

D2 describes a method and a system for end-user controlled processing and routing of messages in a mobile radio communication system. The system comprises a central message processing point (the message handling server), to which is applied a number of applications, which can be controlled by the mentioned control commands (See page 3, line 41-page 4, line 31; page 5, line 19-45; page 6, line 19-26; page 8, line 32-42; page 9, line 13-45; page 13, line 14-27).

D3 refers to a method and a system for providing a user access to presence-, location and availability information (PLAS) across a network.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

(see page 2, line 20- page 3, line 21; page 4, line 29 - page 5, line 24; page 6, line 3-11; page 7, line 7-31; page 10, line 18-21; claims 1, 3, 6 and 8).

The document D1 is regarded as being the closest prior art to the subject-matter of claims 1 and 20, and shows a method and arrangement wherein a client may request for presence information related to a group of users belonging to the same network as the client.

The subject-matter of claims 1 and 20 therefore differs from this known procedure for accessing presence information in that the claimed invention deals with the problem when the client belongs to one network and the group of users belongs to different networks. This is solved by way of:

-Establishing a network subscription, for execution of continuous updates, between the client networks and the other involved networks.

-Receiving and storing updated information at the client network.

-Executing retrieval of updated information by initiating a connection between the client and the client network.

The suggested solution to the problem mentioned above results in a procedure for updating and accessing information between different networks which is not obviously retrieved from studying the prior art D1-D3.

The subject-matter of claims 1 and 20 is therefore novel (Article 33(2) PCT).

Consequently, the invention as set forth in the amended claims 1-25 is novel and involves an inventive step. The invention also is industrially applicable.

12-10-2005

AMENDED CLAIMS

1. A method of providing information to a client from a client access network in the form of user information regarding a plurality of users, **characterised by** the following steps, as executed in the client access network:
- receiving a subscription request from the client for certain information on a set of users, wherein at least some of the users in the set are connected to other access networks,
 - establishing a network subscription for user information updates with each of the other access networks to which users in the set are connected, in response to the received client subscription request,
 - receiving and storing continuously information updates regarding users in the set from the other access networks whenever changes of state are detected for the users in the set,
 - receiving a subsequent request for user information from the client,
 - retrieving stored user information corresponding to the requested information, and
 - sending a notification to the client regarding the retrieved user information, in response to the subsequent user information request.
2. A method according to claim 1, **characterised in** that the users are mobile users.

3. A method according to claim 1 or 2, **characterised in** that the user information is presence information on the users.

5 4. A method according to any of claims 1-3, wherein several of the users in the set are connected to the same user access network, **characterised in** that the client access network sends one common subscription request for those users to that user access network, including a list of
10 the users in the set being connected to that network.

5. A method according to any of claims 1-4, **characterised in** that information updates impacting the present network subscription are received.

15 6. A method according to any of claims 1-5, **characterised in** that, after establishing the network subscriptions, information is initially received from the other access networks on the current states of their respective users.

20 7. A method according to claim 6, **characterised in** that an initial notification is sent to the client regarding the received user information, before receiving the subsequent user information request.

25 8. A method according to any of claims 1-7, **characterised in** that the subsequent request for user information received from the client is limited to a subset of users comprising fewer users than the original set of users.

30 9. A method according to any of claims 1-8, **characterised in** that the subsequent request for user information received

from the client is limited to one or some types of information of the information included in the subscription.

- 5 10.A method according to claim 8 or 9, **characterised in** that the subset of users and/or types of information is selected by the client.
- 10 11.A method according to claim 8 or 9, **characterised in** that the subset of users and/or types of information is adapted to a service and/or application currently utilised by the client.
- 15 12.A method according to any of claims 1-11, **characterised in** that a subsequent notification is sent to the client indicating only the changes since the previous notification.
- 20 13.A method according to any of claims 1-11, **characterised in** that a subsequent notification is sent to the client indicating that nothing has changed since the last notification.
- 25 14.A method according to any of claims 1-13, **characterised in** that the subscription request from the client indicates the types of information needed.
- 30 15.A method according to any of claims 1-14, **characterised in** that the subscription request from the client indicates a time of expiration.

16.A method according to claim 15, **characterised in** that the subscription request from the client specifies a minimum time between successive notifications corresponding to the time of expiration.

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17.A method according to any of claims 1-16, **characterised in** that the set of users is selected by indicating a predetermined list of users.

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18.A method according to any of claims 1-16, **characterised in** that the set of users is selected as an ad hoc list of users.

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19.A method according to any of claims 1-16, **characterised in** that the set of users is selected by adding users to or deleting users from a predetermined list of users.

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20.An arrangement in a client access network for providing information to a connected client in the form of information regarding a plurality of users, **characterised by:**

25

- an information delivery server adapted to: receive a subscription request from the client for certain information on a set of users, wherein at least some of the users in the set are connected to other access networks, establish a network subscription for user information updates with each of the other access networks to which users in the set are connected, in response to the received client subscription request, and receive information updates regarding users in the set continuously from their respective access networks

30

whenever changes of state are detected for the users in the set, and

- a data storage means for storing updated user information,

5 wherein the information delivery server is further adapted to receive a subsequent request for user information from the client, retrieve requested user information from the data storage means, and send a notification to the client including the retrieved user
10 information, in response to the user information request.

21. An arrangement according to claim 20, **characterised in** that the information delivery server is further adapted to initially receive from the other networks information
15 on the current states of their respective users.

22. An arrangement according to claim 21, **characterised in** that the information delivery server is further adapted to send an initial notification to the client containing
20 the received user information.

23. An arrangement according to any of claims 20-22, **characterised in** that the information delivery server is further adapted to send to the client a subsequent
25 notification indicating only the changes since the previous notification.

24. An arrangement according to any of claims 20-23, **characterised in** that the information delivery server is further adapted to send to the client a subsequent
30 notification indicating that nothing has changed since the last notification.

25. An arrangement according to any of claims 20-23, further
comprising a user list server adapted to maintain various
lists of users defined for clients of the client access
5 network, **characterised in** that the user list server is
adapted to provide a predetermined list as a basis for
the selected set users.